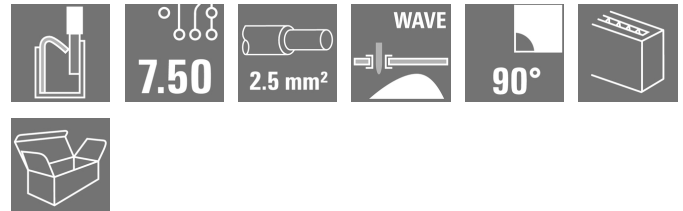


**LMF 7.50/07/90 3.5SN OR BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Product image****The innovative quick connector - simple, safe and economical:**

PCB terminals with spring connection and direct PUSH IN technology. A milestone in connection technology.

Amazingly simple and simply amazing in practice:

- Connect and easily detach solid wires or wires with wire-end ferrules without using tools
- Processed automatically in the reflow or vapour phase
- Potentials and clamping points marked clearly by coloured push buttons

World-class design-in and processing phases, and suitable for a vast range of applications.

**General ordering data**

|              |  |
|--------------|--|
| Version      | Printed circuit board terminals, 7.50 mm, Number of poles: 7, 90°, Solder pin length (l): 3.5 mm, tinned, orange, PUSH IN with actuator, Clamping range, max. : 2.5 mm², Box |
| Order No.    | <a href="#">2667860000</a>   |
| Type         | LMF 7.50/07/90 3.5SN OR BX   |
| GTIN (EAN)   | 4050118804416  |
| Qty.         | 25 pc(s).  |
| Product data | IEC: 1000 V / 24 A / 0.5 - 2.5 mm²<br>UL: 300 V / 20 A / AWG 24 - AWG 12   |
| Packaging    | Box  |

Creation date June 13, 2024 10:23:09 AM CEST

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## Technical data

## Dimensions and weights

|                          |            |                 |            |
|--------------------------|------------|-----------------|------------|
| Depth                    | 19.2 mm    | Depth (inches)  | 0.756 inch |
| Height                   | 18.3 mm    | Height (inches) | 0.72 inch  |
| Height of lowest version | 14.8 mm    | Width           | 40.2 mm    |
| Width (inches)           | 1.583 inch | Net weight      | 12.354 g   |

## System parameters

|  |                              |  |                        |
|--|------------------------------|--|------------------------|
| Product family                             | OMNIMATE Signal - series LMF | Wire connection method                       | PUSH IN with actuator  |
| Mounting onto the PCB                      | THT solder connection        | Conductor outlet direction                   | 90°                    |
| Pitch in mm (P)                            | 7.5 mm                       | Pitch in inches (P)                          | 0.295 "                |
| Number of poles                            | 7                            | Pin series quantity                          | 1                      |
| Number of rows                             | 1                            | Solder pin length (l)                        | 3.5 mm                 |
| Solder pin dimensions                      | d = 0.8 mm                   | Solder eyelet hole diameter (D)              | 1.1 mm                 |
| Solder eyelet hole diameter tolerance (D)+ | 0,1 mm                       | Number of solder pins per pole               | 2                      |
| Screwdriver blade                          | 0.6 x 3.5                    | Screwdriver blade standard                   | DIN 5264               |
| Stripping length                           | 10 mm                        | L1 in mm                                     | 45 mm                  |
| Touch-safe protection acc. to DIN VDE 0470 | IP 20                        | Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch |
| Protection degree                          | IP20                         |  |                        |

## Material data

|                                       |            |                                       |                  |
|---------------------------------------|------------|---------------------------------------|------------------|
| Insulating material                   | Wemid (PA) | Colour                                | orange           |
| Colour chart (similar)                | RAL 2000   | Comparative Tracking Index (CTI)      | ≥ 600            |
| UL 94 flammability rating             | V-0        | Contact material                      | Cu-alloy         |
| Contact surface                       | tinned     | Coating                               | 4-6 µm SN        |
| Tinning type                          | matt       | Layer structure of solder connection  | 4...8 µm Sn matt |
| Storage temperature, min.             | -40 °C     | Storage temperature, max.             | 70 °C            |
| Operating temperature, min.           | -50 °C     | Operating temperature, max.           | 120 °C           |
| Temperature range, installation, min. | -25 °C     | Temperature range, installation, max. | 120 °C           |

## Conductors suitable for connection

|   |   |   |                     |
|---|---|---|---------------------|
| Clamping range, min.                            | 0.12 mm <sup>2</sup>  | Clamping range, max.                            | 2.5 mm <sup>2</sup> |
| Wire connection cross section AWG, min.         | AWG 24  | Wire connection cross section AWG, max.         | AWG 12              |
| Solid, min. H05(07) V-U                         | 0.5 mm <sup>2</sup>   | Solid, max. H05(07) V-U                         | 2.5 mm <sup>2</sup> |
| Flexible, min. H05(07) V-K                      | 0.25 mm <sup>2</sup>  | Flexible, max. H05(07) V-K                      | 2.5 mm <sup>2</sup> |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.25 mm <sup>2</sup>  | w. plastic collar ferrule, DIN 46228 pt 4, max. | 2.5 mm <sup>2</sup> |
| w. wire end ferrule, DIN 46228 pt 1, min.       | 0.25 mm <sup>2</sup>  | w. wire end ferrule, DIN 46228 pt 1, max.       | 2.5 mm <sup>2</sup> |
| Reference text                                  | Length of ferrules is to be chosen depending on the product and the rated voltage. The outside diameter of the plastic collar should not be larger than the pitch (P) |   |                     |

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## Technical data


## Rated data acc. to IEC

|   |                        |   |                   |
|---|------------------------|---|-------------------|
| tested acc. to standard   | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C)                         | 24 A              |
| Rated current, max. number of poles (Tu=20°C)                             | 24 A                   | Rated current, min. number of poles (Tu=40°C)                         | 24 A              |
| Rated current, max. number of poles (Tu=40°C)                             | 24 A                   | Rated voltage for surge voltage class / pollution degree II/2         | 1,000 V           |
| Rated voltage for surge voltage class / pollution degree III/2            | 600 V                  | Rated voltage for surge voltage class / pollution degree III/3        | 500 V             |
| Rated impulse voltage for surge voltage class/ pollution degree II/2      | 6 kV                   | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 6 kV              |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 6 kV                   | Short-time withstand current resistance                               | 3 x 1s with 120 A |

## Rated data acc. to CSA

|                                   |   |                                   |                |
|-----------------------------------|---|-----------------------------------|----------------|
| Institute (CSA)                   |  | Certificate No. (CSA)             | 200039-1815154 |
| Rated voltage (Use group B / CSA) | 300 V   | Rated voltage (Use group D / CSA) | 300 V          |
| Rated current (Use group B / CSA) | 20 A  | Rated current (Use group D / CSA) | 10 A           |
| Wire cross-section, AWG, min.     | AWG 24  | Wire cross-section, AWG, max.     | AWG 12         |
| Reference to approval values      | Specifications are maximum values, details - see approval certificate.            |                                   |                |

## Rated data acc. to UL 1059

|                                       |   |                                       |        |
|---------------------------------------|---|---------------------------------------|--------|
| Institute (cURus)                     |  | Certificate No. (cURus)               | E60693 |
| Rated voltage (Use group B / UL 1059) | 300 V   | Rated voltage (Use group D / UL 1059) | 300 V  |
| Rated current (Use group B / UL 1059) | 20 A  | Rated current (Use group D / UL 1059) | 10 A   |
| Wire cross-section, AWG, min.         | AWG 24  | Wire cross-section, AWG, max.         | AWG 12 |
| Reference to approval values          | Specifications are maximum values, details - see approval certificate.              |                                       |        |

## Packing

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 338 mm |
| VPE width | 130 mm | VPE height | 27 mm  |

## Type tests

|                              |            |  |
|------------------------------|------------|--|
| Test: Durability of markings | Standard   | IEC 61984 section 6.2 and 7.3.2 / 10.11  |
|                              | Test       | mark of origin, type identification, approval marking UL, approval marking CSA, durability |
|                              | Evaluation | available  |

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## Technical data

|   |                |  |
|---|----------------|--|
| Test: Clampable cross section                             | Conductor type | Type of conductor and solid 0.2 mm <sup>2</sup> conductor cross-section    |
|   |                | Type of conductor and solid 2.5 mm <sup>2</sup> conductor cross-section    |
|   |                | Type of conductor and stranded 0.2 mm <sup>2</sup> conductor cross-section |
|   | Evaluation     | passed   |
| Test for damage to and accidental loosening of conductors | Standard       | IEC 60999-1 section 9.4 / 11.99  |
|   | Requirement    | 0.2 kg   |
|   | Conductor type | Type of conductor and solid 0.2 mm <sup>2</sup> conductor cross-section    |
|   |                | Type of conductor and stranded 0.2 mm <sup>2</sup> conductor cross-section |
|   | Evaluation     | passed   |
|   | Requirement    | 0.7 kg   |
|   | Conductor type | Type of conductor and solid 2.5 mm <sup>2</sup> conductor cross-section    |
|   |                |  |
|   | Evaluation     | passed   |
| Pull-out test   | Standard       | IEC 60999-1 section 9.5 / 11.99  |
|   | Requirement    | ≥10 N  |
|   | Conductor type | Type of conductor and solid 0.2 mm <sup>2</sup> conductor cross-section    |
|   |                | Type of conductor and stranded 0.2 mm <sup>2</sup> conductor cross-section |
|   | Evaluation     | passed   |
|   | Requirement    | ≥50 N  |
|   | Conductor type | Type of conductor and solid 2.5 mm <sup>2</sup> conductor cross-section    |
|   |                |  |
|   | Evaluation     | passed   |

## Classifications

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002643    | ETIM 7.0    | EC002643    |
| ETIM 8.0    | EC002643    | ETIM 9.0    | EC002643    |
| ECLASS 9.0  | 27-44-04-01 | ECLASS 9.1  | 27-44-04-01 |
| ECLASS 10.0 | 27-44-04-01 | ECLASS 11.0 | 27-46-01-01 |
| ECLASS 12.0 | 27-46-01-01 | ECLASS 13.0 | 27-46-01-01 |

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[www.weidmueller.com](http://www.weidmueller.com)**Technical data****Important note**

|                |  |
|----------------|--|
| IPC conformity | Conformity: The products are developed, manufactured and delivered according international recognized standards and norms and comply with the assured properties in the data sheet resp. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request.   |
| Notes          | <ul style="list-style-type: none"><li>• Additional variants on request</li><li>• Rated current related to rated cross-section &amp; min. No. of poles.</li><li>• Wire end ferrule without plastic collar to DIN 46228/1</li><li>• Wire end ferrule with plastic collar to DIN 46228/4</li><li>• P on drawing = pitch</li><li>• Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards.</li><li>• The test point can only be used as potential-pickup point.</li><li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li></ul> |

**Approvals**

Approvals



|                         |            |
|-------------------------|------------|
| UL File Number Search   | UL Website |
| Certificate No. (cURus) | E60693     |

**Downloads**

|                  |  |
|------------------|--|
| Engineering Data | <a href="#">CAD data – STEP</a>          |
| Catalogues       | <a href="#">Catalogues in PDF-format</a> |

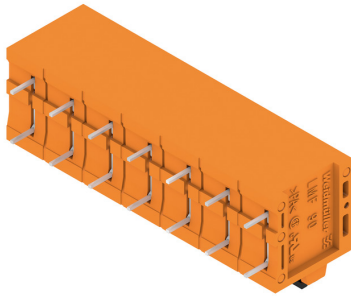
## LMF 7.50/07/90 3.5SN OR BX

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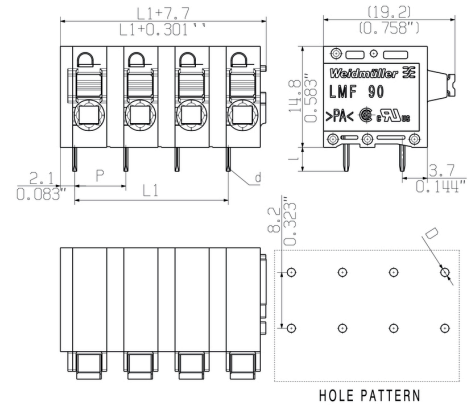
[www.weidmueller.com](http://www.weidmueller.com)

## Drawings

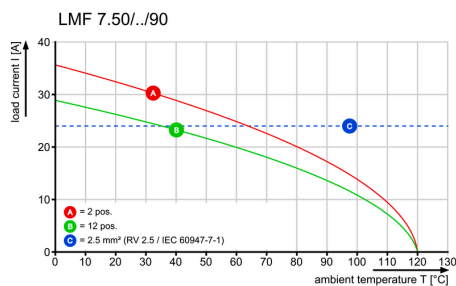
## Product image



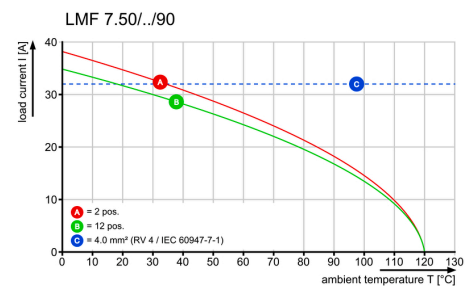
## Dimensional drawing



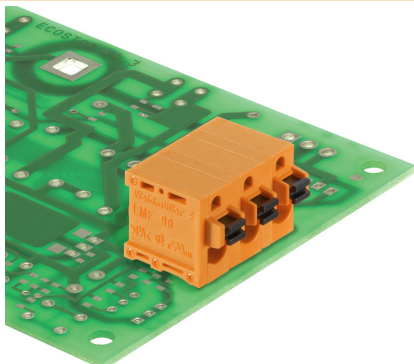
## Derating curve



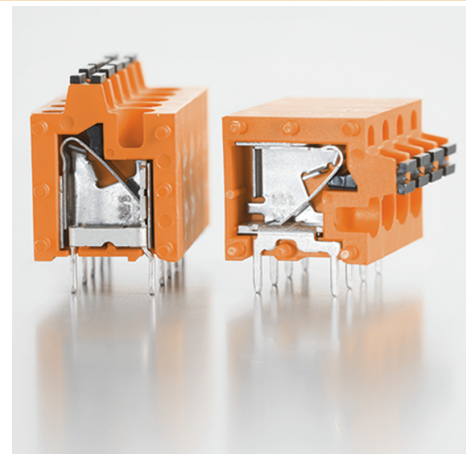
## Derating curve



## Product benefits



## Product benefits



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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****Additional accessories****No task is too small when creating the perfect solution.**

Connections form just one part of the overall process. Small details are often the key to the perfect solution in applications where potentials are tested, grouped or even isolated.

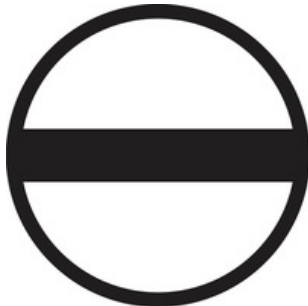
A system is not a system without small but essential details:

- Test plugs ensure reliable pick-up from diagnostic sockets

In tandem with the manufacturing process and application.

**General ordering data**

| Type       | PS 2.0 MC                  | Version  | Product data | Packaging |
|------------|----------------------------|--|--------------|-----------|
| Order No.  | <a href="#">0310000000</a> | PCB plug-in connector, Accessories, Test plug, red, Number of poles: 1 |              | Box       |
| GTIN (EAN) | 4008190000059              |  |              |           |
| Qty.       | 20 pc(s).                  |  |              |           |

**Slotted screwdriver**

VDE insulated slot-head screwdriver, SDI DIN 7437, ISO 2380/2, drive output acc. to DIN 5264, ISO 2380/1. SoftFinish grip

**General ordering data**

| Type       | SDIS 0.6X3.5X100           | Version                  |
|------------|----------------------------|--------------------------|
| Order No.  | <a href="#">9008390000</a> | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056354              |                          |
| Qty.       | 1 pc(s).                   |                          |

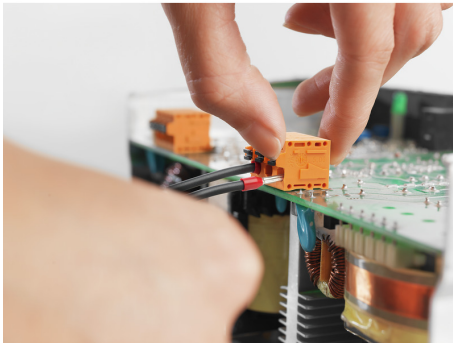
### LMF 7.50/07/90 3.5SN OR BX

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[www.weidmueller.com](http://www.weidmueller.com)

## Drawings

### Product benefits



### Product benefits





## Recommended wave soldering profiles

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Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
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### Single Wave:



### Double Wave:



### Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:

- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.

We reserve the right to make technical changes.